

REPORT ON BOILERS.

No. 36136

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Port of Sunderland.

Writing Report.....19..... When handed in at Local Office.....19.....

Survey held at Sunderland. Date, First Survey 31 January 1953 Last Survey 1 October 1953on the M/V "SHEAF ROYAL" (Number of Visits 28) Tons Gross..... Net.....Built at Sunderland By whom built J.L. Thompson Yard No. 671 When built 1953made at Sunderland By whom made Wm Daxford & Sons Ltd Engine No. 285 When made 1953made at Sunderland By whom made G. Clark (1938) Ltd Boiler No. 1502 When made 1953Horse Power..... Owners Sheaf Steam Shipping Co Ltd Port belonging to Newcastle 29

TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel..... (Letter for Record.....)

Heating Surface of Boilers 6080 sq ft Is forced draught fitted Yes Coal or Oil fired oil & gasDescription of Boilers 2. Single-ended multitubular Working Pressure 150 lbsby hydraulic pressure to 275 lbs Date of test 21/9/53 No. of Certificate 4848 Can each boiler be worked separately Yesof Firegrate in each Boiler OF No. and Description of safety valves to each boiler Double Spring, high lift: 2 3/4"of each set of valves per boiler per Rule: 5.45 x 2 Pressure to which they are adjusted..... Are they fitted with easing gear Yesof donkey boilers, state whether steam from main boilers can enter the donkey boiler YesDistance between boilers or uptakes and bunkers or woodwork 18" Is oil fuel carried in the double bottom under boilers.....Distance between shell of boiler and tank top plating flat 3' 0" Is the bottom of the boiler insulated.....Internal dia. of boilers 15'-3 1/2" Length 12'-0" Shell plates: Material S. M. Steel Tensile strength 29-33 T.T.Are the shell plates welded or flanged No Description of riveting: circ. seams DRT.R.D.B.S. Yes Diameter of rivet holes in 1 1/8" Pitch of rivets 3 7/8" x 4 5/8"Percentage of strength of circ. intermediate seam plate: 66.3Percentage of strength of circ. intermediate seam rivets: 45.9Percentage of strength of longitudinal joint plate: 85.24Percentage of strength of longitudinal joint rivets: 93.9 Working pressure of shell by Rules 151 lbsPercentage of strength of longitudinal joint combined: 88.85No. and Description of Furnaces in each Boiler Three Brighton SectionTensile strength 26-30 T.T. Smallest outside diameter 3'-8 3/8"Thickness of plates 15" 32 15" 32 Description of longitudinal joint weldedWorking pressure of furnace by Rules 152 lbsMaterial S. M. Steel Tensile strength 26-30 T.T. Thickness F 1 3/4" B 1 3/4" Pitch of stays 22 x 21"Working pressure by Rules 150 lbsMaterial S. M. Steel Tensile strength 26-30 T.T. Thickness 8" 3/4"Pitch across wide water spaces 13 1/2" x 4 1/4" Working pressure 340 lbsMaterial S. M. Steel Tensile strength 29-33 T.T. Depth and thickness of girder 250 lbsLength as per Rule 37" Distance apart 9" No. and pitch of staysWorking pressure by Rules 152 lbs Combustion chamber plates: Material S. M. SteelTensile strength 26-30 T.T. Thickness: Sides 11" Back 11" Top 11" Bottom 25"Backs welded Sides seamed +Are stays fitted with nuts or riveted over Yes Caulked at shell YesMaterial S. M. Steel Tensile strength 26-30 T.T.Material S. M. Steel Tensile strength 26-30 T.T. Thickness 24"Working pressure by Rules 152 lbs Are stays fitted with nuts or riveted over weldedMain stays: Material S. M. Steel Tensile strength 28-32 T.T.At body of stay 2 7/8" - 3 1/4" No. of threads per inch 6 Area supported by each stay 22 x 21"Over threads 2 3/4" - 3 1/8" Screw stays: Material S. M. Steel Tensile strength 26-30 T.T.At turned off part 1 1/2" 1 3/8" 1 5/8" No. of threads per inch 4Over threads 1 3/4" PersewedLloyd's Register
Foundation
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Working pressure by Rules *156.152.155 + 1/4 lb.* No. ☒ Are the stays drilled at the outer ends ☒ Margin stays: Diameter ☒ At turned off part ☒ Over threads *1 5/8" + 1 3/8"*
No. of threads per inch *welded* ☒ Area supported by each stay ☒ Working pressure by Rules *156 + 152*
Tubes: Material *Hot rolled Steel* External diameter { Plain *2 1/2"* Stay *2 1/2"* Thickness *9 w.g.* No. of threads per inch *9*
Pitch of tubes *3 3/4" x 3 5/8"* Working pressure by Rules *196 + 192 lb.* Manhole compensation: Size of shell plate *19 3/4" x 15 3/4"* Section of compensating ring *3'-0" x 2'-8" x 1 1/2"* No. of rivets and diameter of rivet holes *34 at 1"*
Outer row rivet pitch at ends *9 1/8"* Depth of flange if manhole flanged *3 1/2"* Steam Dome: Material *None*
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets
Internal diameter Working pressure by Rules Thickness of crown No. and stays
How connected to shell Inner radius of crown Working pressure by Rules
of rivets in outer row in dome connection to shell Size of doubling plate under dome Diameter of rivet holes

Type of Superheater Manufacturers of Tubes Steel forgings Steel castings Internal diameter and thickness of tubes
Number of elements Material of tubes Tensile strength Thickness Can the superheater be the boiler be worked separately Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Area of each safety valve Are the safety valves fitted with easing gear Working pressure Rules Pressure to which the safety valves are adjusted Hydraulic test tubes forgings and castings and after assembly in place Are drawn valves fitted to free the superheater from water where necessary

Have all the requirements of *Chapter 'I'* Sections 14 to 22 inclusive for boilers been complied with *Yps* ☒

GEORGE CLARK (1938) LTD
The foregoing is a correct description, *W.R. Jones* Mgr

Dates of Survey while building { During progress of work in shops - - 1953 Jan 31 Feb 22.23.26.29 July 1.7.8.9. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) app. 7/6/52 for dup
During erection on board vessel - - - Oct 1 Total No. of visits 28

Is this Boiler a duplicate of a previous case ☒ If so, state Vessel's name and Report No. *The boilers have been*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The boilers have been constructed under Special Survey in accordance with the approved plans & the rules of the Society. The materials & workmanship are good. On Completion they were test by hydraulic pressure to 245 lbs, & found tight & sound at that pressure. They have been securely fixed on board the vessel & the safety valves adjusted under steam to the working pressure.*

For recommendation please see machinery report.

Survey Fee 2 *Days* £ 91 - : 10 - : 0 } When applied for, 19.....
Travelling Expenses (if any) £ : : } When received, 19.....

NOV 26 1953

John Lundberg
Engineer Surveyor to Lloyd's Register of Shipping

TUESDAY 29 DEC 1953

Committee's Minute

Assigned *See Rpt. 46*



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